IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

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| In re Application of:<br>    Dale E. Gulick | Conf. No. 5869 |
| Serial No.: 10/066,948 | Examiner: T. Szymanski |
| Filed: February 4, 2002 | Group Art Unit: 2134 |
| | Att'y Docket: 2000.052000 |
| For: REMOTE MANAGEMENT MECHANISM<br>    TO PREVENT ILLEGAL SYSTEM<br>    COMMANDS | Customer No. 23720 |

## APPEAL BRIEF

Commissioner of Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

Applicant hereby submits this Appeal Brief to the Board of Patent Appeals and Interferences in response to the Notice of Non-Compliant Appeal Brief mailed November 13, 2006.

It is believed that no fee is due since the filing fee for this Appeal Brief has been previously paid. However, should any fees under 37 C.F.R. §§ 1.16 to 1.21 be required for any reason the Commissioner is authorized to deduct the fee for filing this Appeal Brief from **Williams, Morgan & Amerson's P.C. Deposit Account 50-0786/2000.052000.**

# I. REAL PARTY IN INTEREST

The present application is owned by Advanced Micro Devices, Inc. The assignment of the present application to Advanced Micro Devices, Inc., is recorded at Reel 12576, Frame 0459.

# II. RELATED APPEALS AND INTERFERENCES

Applicant is not aware of any related appeals and/or interferences that might affect the outcome of this proceeding.

# III. STATUS OF THE CLAIMS

Claims 1-46 are pending in the application. Claims 1-6, 8-13, 15-20, and 22-45 stand rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by Rakavy, et al (U.S. Patent No. 5,978,912). Claims 7, 14, 21, and 46 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Rakavy.

# IV. STATUS OF AMENDMENTS

There were no amendments after the final rejections.

# V. SUMMARY OF CLAIMED SUBJECT MATTER

Independent claim 1 sets forth a method including receiving a request for a system action, initiating a timer, and generating an authorization request for the system action. Independent claim 1 also sets forth evaluating a result of the authorization request for the system action if received before an expiration of the timer and granting the request for the system action if the expiration of the timer occurs before the result of the authorization request for the system action

is received. For example, in one embodiment of a method 800 for evaluating requests for system resets a request is received for a system reset, in block 810. The method 800 checks the watchdog timer 310 for expiration, in block 820. If the method 800 determines that the watchdog timer 310 has not expired, in decision block 830, then the method 800 aborts the system reset requested in block 810. If the method 800 determines that the watchdog timer 310 has expired, in decision block 830, then the method 800 performs, or allows to be performed, the system reset requested in block 810. See Patent Application, page 31, ll. 16-24, and Figure 9.

Independent claim 8 sets forth a method of operating a computer system that includes the steps of receiving a request for a system action, initiating a timer, and generating an authorization request for the system action. Independent claim 8 also sets forth the steps of evaluating a result of the authorization request for the system action if received before an expiration of the timer and granting the request for the system action if the expiration of the timer occurs before the result of the authorization request for the system action is received. For example, in one embodiment of a method 800 for evaluating requests for system resets a request is received for a system reset, in block 810. The method 800 checks the watchdog timer 310 for expiration, in block 820. If the method 800 determines that the watchdog timer 310 has not expired, in decision block 830, then the method 800 aborts the system reset requested in block 810. If the method 800 determines that the watchdog timer 310 has expired, in decision block 830, then the method 800 performs, or allows to be performed, the system reset requested in block 810. See Patent Application, page 31, ll. 16-24, and Figure 9. The steps set forth in independent claim 8 may be performed by an RMCP command set unit 336 that includes a watchdog timer check entry 910 and a lock entry 915. The watchdog timer check entry 910 may include computer code and/or hardware configured to perform a method identical to or similar in

function to the method 800 shown in Fig. 9. See Patent Application, page 32, ll. 9-11, and Figure 10.

Independent claim 15 sets forth a computer readable medium encoded with instructions that, when executed by a computer system, performs a method for operating the computer system. The instructions include receiving a request for a system action, initiating a timer, and generating an authorization request for the system action. Independent claim 15 also sets forth instructions for evaluating a result of the authorization request for the system action if received before an expiration of the timer and granting the request for the system action if the expiration of the timer occurs before the result of the authorization request for the system action is received. For example, in one embodiment of a method 800 for evaluating requests for system resets a request is received for a system reset, in block 810. The method 800 checks the watchdog timer 310 for expiration, in block 820. If the method 800 determines that the watchdog timer 310 has not expired, in decision block 830, then the method 800 aborts the system reset requested in block 810. If the method 800 determines that the watchdog timer 310 has expired, in decision block 830, then the method 800 performs, or allows to be performed, the system reset requested in block 810. See Patent Application, page 31, ll. 16-24, and Figure 9.

Independent claim 22 sets forth a computer system that includes a timer, an SMI request register, and a processor coupled to the timer and coupled to the SMI request register. The processor is configured to receive an authorization request for a system action and initialize the timer in response to receiving the authorization request for the system action. For example, an ASF south bridge 212 includes a watchdog timer 310, an SMI request register 306, and a microcontroller 320. The watchdog timer 310 may be reset at predetermined times, such as upon an occurrence of an ASF event. The watchdog timer 310 may also be reset upon an occurrence

of an ACPI event.  See Patent Application, page 24, ll. 8-10 and Figure 4.  Fig. 12 illustrates a flowchart of an embodiment of a method 1100 for verifying RMCP requests that may be implemented by the microcontroller 320, according to one aspect of the present invention.  The method 1100 includes receiving an RMCP request, in block 1110.  The RMCP request may include any request defined by the version of the RMCP protocol implemented in the computer system 200.  The RMCP request may also include a fake or "spoofed" request issued by an unauthorized requestor.  The method 1100 initiates a security timer, in block 1120.  The security timer may include the watchdog timer 310.  See Patent Application, page 33, ll. 4-10.

Independent claim 31 sets forth a computer system that includes a timing means, an SMI request means, and a processing means coupled to the timer and coupled to the SMI request register.  The processor is configured to receive an authorization request for a system action and initialize the timer in response to receiving the authorization request for the system action. For example, an ASF south bridge 212 includes a watchdog timer 310, an SMI request register 306, and a microcontroller 320.  The watchdog timer 310 may be reset at predetermined times, such as upon an occurrence of an ASF event.  The watchdog timer 310 may also be reset upon an occurrence of an ACPI event.  See Patent Application, page 24, ll. 8-10 and Figure 4.  Fig. 12 illustrates a flowchart of an embodiment of a method 1100 for verifying RMCP requests that may be implemented by the microcontroller 320, according to one aspect of the present invention. The method 1100 includes receiving an RMCP request, in block 1110.  The RMCP request may include any request defined by the version of the RMCP protocol implemented in the computer system 200.  The RMCP request may also include a fake or "spoofed" request issued by an unauthorized requestor.  The method 1100 initiates a security timer, in block 1120.

The security timer may include the watchdog timer 310. See Patent Application, page 33, ll. 4-10.

Independent claim 40 sets forth a computer system that includes means for receiving a request for a system action, means for initiating a timer, and means for generating an authorization request for the system action. Independent claim 8 also sets forth means for evaluating a result of the authorization request for the system action if received before an expiration of the timer and means for granting the request for the system action if the expiration of the timer occurs before the result of the authorization request for the system action is received. For example, in one embodiment of a method 800 (which may be implemented in a microcontroller 320) for evaluating requests for system resets a request is received for a system reset, in block 810. The method 800 checks the watchdog timer 310 for expiration, in block 820. If the method 800 determines that the watchdog timer 310 has not expired, in decision block 830, then the method 800 aborts the system reset requested in block 810. If the method 800 determines that the watchdog timer 310 has expired, in decision block 830, then the method 800 performs, or allows to be performed, the system reset requested in block 810. See Patent Application, page 31, ll. 16-24, and Figure 9.

## VI.  GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

Appellant respectfully requests that the Board review and overturn the two rejections present in this case. The following issues are presented on appeal in this case:

(A)    Whether claims 1-6, 8-13, 15-20, and 22-45 are anticipated by Rakavy; and

(B)    Whether claims 7, 14, 21, and 46 are obvious over Rakavy.

# VII.  ARGUMENT

## A.  Legal Standards

An anticipating reference by definition must disclose every limitation of the rejected claim in the same relationship to one another as set forth in the claim. *In re Bond*, 15 U.S.P.Q.2d 1566, 1567 (Fed. Cir. 1990).

To establish a *prima facie* case of obviousness, three basic criteria must be met.  First, the prior art reference (or references when combined) must teach or suggest all the claim limitations. *In re Royka*, 490 F.2d 981, 180 U.S.P.Q. 580 (CCPA 1974).  Second, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings.  That is, there must be something in the prior art as a whole to suggest the desirability, and thus the obviousness, of making the combination. *Panduit Corp. v. Dennison Mfg. Co.*, 810 F.2d 1561 (Fed. Cir. 1986).  In fact, the absence of a suggestion to combine is dispositive in an obviousness determination. *Gambro Lundia AB v. Baxter Healthcare Corp.*, 110 F.3d 1573 (Fed. Cir. 1997).  The mere fact that the prior art can be combined or modified does not make the resultant combination obvious unless the prior art also suggests the desirability of the combination. *In re Mills*, 916 F.2d 680, 16 U.S.P.Q.2d 1430 (Fed. Cir. 1990); M.P.E.P. § 2143.01. Third, there must be a reasonable expectation of success.

The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 U.S.P.Q.2d 1438 (Fed. Cir. 1991); M.P.E.P. § 2142. A recent Federal Circuit case emphasizes that, in an obviousness situation, the prior art must disclose each and every element of the claimed invention, and that any motivation to combine or

modify the prior art must be based upon a suggestion in the prior art. *In re Lee*, 61 U.S.P.Q.2d 143 (Fed. Cir. 2002). Conclusory statements regarding common knowledge and common sense are insufficient to support a finding of obviousness. *Id*. at 1434-35. Moreover, it is the claimed invention, <u>as a whole</u>, that must be considered for purposes of determining obviousness. A mere selection of various bits and pieces of the claimed invention from various sources of prior art does not render a claimed invention obvious, unless there is a suggestion or motivation in the prior art for the claimed invention, <u>when considered as a whole</u>.

**B.** **<u>Claims 1-6, 8-13, 15-20, and 22-45 are not anticipated by Rakavy</u>.**

Rakavy describes providing an alert packet to a management workstation 200, which may provide a response. The response may be used to authenticate the management workstation 200, *e.g.*, by calculating a hash function based on the message contents and a secret key, if the response to the alert packet is received from the management workstation 200 within a configurable time period. See Rakavy, col. 9, ll. 2-45. Rakavy also describes detecting operating system failures based on expiration of a watchdog timer. The watchdog mechanism described by Rakavy does not immediately reset the machine after detecting an operating system failure, but instead allows certain preliminary data collection operations to take place first. See Rakavy, col. 16, ll. 10-33.

As understood by Applicant, the Examiner equated the timer set forth in the independent claims with the configurable time period described by Rakavy. The Examiner also interpreted the response from the management workstation 200 as inherently including a request for authentication and/or authorization. The Examiner therefore equated the response provided by the management workstation 200 with the request for a system action set forth in the independent

claims. Since the response may be used to authenticate the management workstation 200, the Examiner alleges that an authorization request is inherently generated. Thus, the Examiner alleges that a result of the authorization request is evaluated for the system action (the request for authentication allegedly included in the response) if the response is received before the expiration of the configurable time period.

However, even if Applicant accepts the Examiner's interpretation of Rakavy, Applicant respectfully submits that Rakavy still fails to teach or suggest granting the request for the system action if the expiration of the timer occurs before the result of the authorization request for the system action is received, as set forth in independent claims 1, 8, 15, 22, 31, and 40. To the contrary, if the configurable time period expires before the response is received from the management computer 200, then no request for any system action has been received. Consequently, no authorization request will be generated and no request for any system action can possibly be granted under any circumstances.

Applicant also notes that Rakavy describes detecting operating system failures based on expiration of a watchdog timer, as discussed above. However, the detection of operating system failures described by Rakavy is independent of providing the alert packets and/or receiving requests from the management computer 200 within the configurable time period. In fact, the network enhanced BIOS 600, which issues the alert packets and waits for responses from the management computer 200, is designed to operate independently of the operating system 415. See Rakavy, col. 8, ll. 64 – 67 and Figure 4. Thus, Applicant respectfully submits that independent claims 1, 8, 15, 22, 31, and 40 do not read on the operating system failure detection techniques described in Rakavy.

For at least the aforementioned reasons, Applicant respectfully submits that Rakavy fails to teach or suggest all the limitations of the invention set forth in independent claims 1, 8, 15, 22, 31, and 40. Thus, Applicant respectfully submits that the present invention is not anticipated by Rakavy and requests that the Examiner's rejections of claims 1-6, 8-13, 15-20, and 22-45 under 35 U.S.C. § 102(b) be REVERSED.

## C. Claims 7, 14, 21, and 46 are not obvious over Rakavy.

As discussed above, Rakavy fails to teach or suggest granting the request for the system action if the expiration of the timer occurs before the result of the authorization request for the system action is received, as set forth in independent claims 1, 8, 15, 22, 31, and 40. In rejecting claims 7, 14, 21, and 46, the Examiner alleges that the person of ordinary skill in the art would recognize that programming a timer for a time period of approximately 2 seconds would be obvious so as to provide for a reasonable period of time for the implementation of a given system. However, the Examiner's allegation regarding of the actions of a person of ordinary skill in the art do not remedy the aforementioned fundamental deficiency of Rakavy. Accordingly, Applicant respectfully submits that the prior art of record fails to teach or suggest all the limitations of the claimed invention.

For at least the aforementioned reasons, Applicant submits that the Examiner has failed to make a *prima facie* case that the present invention is obvious over Rakavy and requests that the Examiner's rejections of claims 7, 14, 21, and 46 under 35 U.S.C. § 103(a) be REVERSED.

# VIII.  CLAIMS APPENDIX

The claims that are the subject of the present appeal – claims 1-46 – are set forth in the attached "Claims Appendix."

# IX.   EVIDENCE APPENDIX

There is no separate Evidence Appendix for this appeal.

# X.   RELATED PROCEEDINGS APPENDIX

There is no Related Proceedings Appendix for this appeal.

# XI.   CONCLUSION

In view of the foregoing, it is respectfully submitted that the Examiner erred in not allowing all claims pending in the present application, claims 1-46, over the prior art of record. The undersigned may be contacted at (713) 934-4052 with respect to any questions, comments or suggestions relating to this appeal.

Respectfully submitted,

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                                      AGENT FOR APPLICANTS

# CLAIMS APPENDIX

1.      (Original) A method of operating a computer system, the method comprising:

receiving a request for a system action;

initiating a timer;

generating an authorization request for the system action;

evaluating a result of the authorization request for the system action if received before an

          expiration of the timer; and

granting the request for the system action if the expiration of the timer occurs before the result of

          the authorization request for the system action is received.


2.      (Previously Presented) The method of claim 1, wherein receiving the request for the

system action comprises receiving a remote management and control protocol (RMCP) request

for the system action.


3.      (Original) The method of claim 2, wherein receiving the RMCP request for the system

action comprises receiving one of a system reset, a system boot, or a system reboot.


4.      (Original) The method of claim 1, wherein initiating the timer comprises initiating a

          watchdog timer.


5.      (Original) The method of claim 1, wherein generating the authorization request for the

          system action comprises generating an SMI request.


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6.      (Original) The method of claim 5, wherein generating the SMI request comprises requesting the authorization request for the system action inside SMM.

7.      (Original) The method of claim 1, initiating the timer comprises initializing the timer for approximately two seconds, wherein the expiration of the timer comprises the approximately two seconds.

8.      (Original) A method of operating a computer system, the method comprising the steps of:

receiving a request for a system action;

initiating a timer;

generating an authorization request for the system action;

evaluating a result of the authorization request for the system action if received before an expiration of the timer; and

granting the request for the system action if the expiration of the timer occurs before the result of the authorization request for the system action is received.

9.      (Previously Presented) The method of claim 8, wherein the step of receiving the request for the system action comprises the step of receiving a remote management and control protocol (RMCP) request for the system action.

10.     (Original) The method of claim 9, wherein the step of receiving the RMCP request for the system action comprises the step of receiving one of a system reset, a system boot, or a system reboot.

11.    (Original) The method of claim 8, wherein the step of initiating the timer comprises the step of initiating a watchdog timer.

12.    (Original) The method of claim 8, wherein the step of generating the authorization request for the system action comprises the step of generating an SMI request.

13.    (Original) The method of claim 12, wherein the step of generating the SMI request comprises the step of requesting the authorization request for the system action inside SMM.

14.    (Original) The method of claim 8, wherein the step of initiating the timer comprises the step of initializing the timer for approximately two seconds, wherein the expiration of the timer comprises the approximately two seconds.

15.    (Original) A computer readable medium encoded with instructions that, when executed by a computer system, performs a method for operating the computer system, the method comprising:

receiving a request for a system action;

initiating a timer;

generating an authorization request for the system action;

evaluating a result of the authorization request for the system action if received before an expiration of the timer; and

granting the request for the system action if the expiration of the timer occurs before the result of the authorization request for the system action is received.

16.     (Currently Amended) The computer readable medium of claim 15, wherein receiving the request for the system action comprises receiving [[an]] a remote management and control protocol (RMCP) request for the system action.

17.     (Original) The computer readable medium of claim 16, wherein receiving the RMCP request for the system action comprises receiving one of a system reset, a system boot, or a system reboot.

18.     (Original) The computer readable medium of claim 15, wherein initiating the timer comprises initiating a watchdog timer.

19.     (Original) The computer readable medium of claim 15, wherein generating the authorization request for the system action comprises generating an SMI request.

20.     (Original) The computer readable medium of claim 19, wherein generating the SMI request comprises requesting the authorization request for the system action inside SMM.

21.     (Original) The computer readable medium of claim 15, wherein initiating the timer comprises initializing the timer for approximately two seconds, wherein the expiration of the timer comprises the approximately two seconds.

22.    (Original) A computer system, comprising:

a timer;

an SMI request register; and

a processor coupled to the timer and coupled to the SMI request register, wherein the processor

is configured to receive an authorization request for a system action, wherein the

processor is further configured to initialize the timer in response to receiving the

authorization request for the system action.


23.    (Original) The computer system of claim 22, wherein the processor is further configured

to provide an authorization entry to the SMI request register in response to receiving the

authorization request for the system action.


24.    (Original) The computer system of claim 22, wherein the timer, the SMI request register,

and the processor are comprised on an integrated circuit.


25.    (Original) The computer system of claim 22, further comprising:

an Ethernet controller.


26.    (Original) The computer system of claim 25, wherein the Ethernet controller is

configured to receive a request for the system action.

27.     (Previously Presented) The computer system of claim 25, wherein the system action is a remote management and control protocol (RMCP) request.

28.     (Original) The computer system of claim 22, wherein the processor is further configured to receive a request for the system action.

29.     (Original) The computer system of claim 22, further comprising:

a memory.

30.     (Original) The computer system of claim 29, wherein the SMI request register is configured to initialize system management mode (SMM), wherein the memory is configured to store SMM code in response to the SMI request register initializing SMM.

31.     (Original) A computer system, comprising:

a timing means;

an SMI request means; and

a processing means coupled to the timing means and coupled to the SMI request means, wherein the processing means is configured to receive an authorization request for a system action, wherein the processing means is further configured to initialize the timing means in response to receiving the authorization request for the system action.

32.    (Original) The computer system of claim 31, wherein the processing means is further configured to provide an authorization entry to the SMI request means in response to receiving the authorization request for the system action.

33.    (Original) The computer system of claim 31, wherein the timing means, the SMI request means, and the processing means are comprised on an integrated circuit.

34.    (Original) The computer system of claim 31, further comprising:

an Ethernet means.

35.    (Original) The computer system of claim 34, wherein the Ethernet means is configured to receive a request for the system action.

36.    (Currently amended) The computer system of claim 34, wherein the system action is [[an]] a remote management and control protocol (RMCP) request.

37.    (Original) The computer system of claim 31, wherein the processing means is further configured to receive a request for the system action.

38.    (Original) The computer system of claim 31, further comprising:

a storage means.

39.     (Original) The computer system of claim 38, wherein the SMI request means is configured to initialize system management mode (SMM), wherein the storage means is configured to store SMM code in response to the SMI request means initializing SMM.

40.     (Original) A computer system, comprising:

means for receiving a request for a system action;

means for initiating a timer;

means for generating an authorization request for the system action;

means for evaluating a result of the authorization request for the system action if received before

        an expiration of the timer; and

means for granting the request for the system action if the expiration of the timer occurs before

        the result of the authorization request for the system action is received.

41.     (Currently amended) The computer system of claim 40, wherein the means for receiving the request for the system action comprises means for receiving [[an]] a remote management and control protocol (RMCP) request for the system action.

42.     (Original) The computer system of claim 41, wherein the means for receiving the RMCP request for the system action comprises means for receiving one of a system reset, a system boot, or a system reboot.

43.     (Original) The computer system of claim 40, wherein the means for initiating the timer comprises means for initiating a watchdog timer.

44.    (Original) The computer system of claim 40, wherein the means for generating the authorization request for the system action comprises means for generating an SMI request.

45.    (Original) The computer system of claim 44, wherein means for generating the SMI request comprises means for requesting the authorization request for the system action inside SMM.

46.    (Original) The computer system of claim 40, the means for initiating the timer comprises means for initializing the timer for approximately two seconds, wherein the expiration of the timer comprises the approximately two seconds.

47.    (Withdrawn) A method of operating a computer system, the method comprising:

receiving a request for a system action;

initiating a timer;

generating an authorization request for the system action;

evaluating a result of the authorization request for the system action if received before an expiration of the timer; and

refusing the request for the system action if the expiration of the timer occurs before the result of the authorization request for the system action is received.